APPLICATION NO: 10/693,046
REPLY TO OFFICE ACTION OF 09/08/2006

AMENDMENTS TO THE SPECIFICATION

A. Please replace the second paragraph on page 2 from line 8 to line 12 with the following amended paragraph:

A miniature air compressor usually used in art designing for providing compressed air to an air gun for equally spraying paint. However, almost all ~~the~~ conventional small ~~compressor has~~ compressors have a complicated structure and ~~has~~ have a piston that may not be smoothly operated and ~~provides~~ provide an unstable compressed air current.

B. Please replace the last paragraph on page 1 and the first paragraph on page 2, which is a continuation of the last paragraph on page 1, with the following amended paragraph:

To achieve the objective, the miniature air compressor in accordance with the present invention comprises a motor having a shaft for driving a crank. A cylinder has an open end allowing a second end of the crank extending into the cylinder for compressing the air and a ~~close~~ closed end opposite to the open end of the cylinder. The cylinder has an inlet and an outlet respectively defined in the ~~close~~ closed end thereof and extending to communicate with an inner periphery of the cylinder. A cover is longitudinally mounted to the ~~close~~ closed end of the cylinder. An input passage and an output passage are respectively defined in the cover. The input passage and the output passage respectively communicate with the inlet and the outlet of the cylinder. A valve sheet is secured between the ~~close~~ closed end of the

cylinder and the cover. The valve sheet ~~selectively~~ sequentially closes the outlet in the cylinder and the input passage in the cover.

C. Please replace the last paragraph on page 3 and the first line on page 4, which is a continuation of the last paragraph on page 3, with the following amended paragraph:

The transmission device (20) includes ~~a~~ an eccentric cam shaped ~~connector~~ crank (22) eccentrically and securely mounted to a free end of the shaft (11). The ~~connector~~ crank (22) includes a stub (23) perpendicularly extending therefrom opposite to the shaft (11) of the motor (10). A ~~crank~~ piston rod (25) is pivotally mounted to the stub (23) and is perpendicular relative to the shaft (11). The ~~crank~~ piston rod (25) includes a first end and a second end opposite to each other. A bearing (26) is mounted in the first end of the ~~crank~~ piston rod (25) and the stub (23) of the ~~connector~~ crank (22) is securely received in the bearing (26). A resilient seal ~~valve~~ (27) is longitudinally secured on the second end of the ~~crank~~ piston rod (25) by a fastener (28) and ~~reciprocally~~ reciprocates in the cylinder (40) for ~~compressed~~ compressing air in the cylinder (40).

D. Please replace the third paragraph on page 4 from line 4 to line 18 with the following amended paragraph:

The cylinder (40) has an open end allowing the second end of the ~~crank~~ piston rod (25) extending into the cylinder (40) and a ~~close~~ closed end facing the cover (50). An outlet (42) and an inlet (43) are respectively defined in the ~~close~~ closed end of the cylinder (40) ~~and each extending~~ to communicate with an inner periphery of the cylinder (40). A first inclined stopper (41) extends from the ~~close~~ closed end~~,~~

into the inlet (43) and facing the cover (50). A valve sheet (44) ~~abuts~~ is facially attached to the ~~an~~ outer periphery of the closed end of the cylinder (40) for covering the inlet (43) and the outlet (42). The valve sheet (44) includes a U shaped first ~~valve~~ flapper (46) and ~~a~~ an inverted U shaped second ~~calve~~ flapper (45) respectively corresponding to the inlet (43) and the outlet (42). The first ~~valve~~ flapper (46) is opened to admit air entering the cylinder (40) via the inlet (43) while the piston rod (25) is actuated to perform an intake stroke. Meanwhile, ~~eselectively wiggled into the inlet (43) and abuts~~ the first inclined stopper (41) is capable of preventing ~~to prevent~~ the first ~~valve~~ flapper (46) from being ~~overly wiggled~~ over flapped toward the inlet (43). ~~, and~~ The ~~the~~ second ~~valve~~ flapper (45) is biased to close ~~selectively closes~~ the outlet (42) when the ~~crank~~ piston rod (25) moves backward ~~moved relative to~~ toward the ~~close~~ closed end of the cylinder (40) to perform a compression stroke.

E. Please replace the last paragraph on page 4 and the first paragraph on page 5, which is a continuation of the last paragraph on page 4, with the following amended paragraph:

The cover (50) is securely and airtightly mounted to the ~~close~~ closed end of the cylinder (40) for holding the valve sheet (44) in place. The cover (50) includes an inlet passage (53) defined therein and corresponding to the first ~~valve~~ flapper (46), and an outlet passage (52) defined in the cover (50) and corresponding to the second ~~valve~~ flapper (45). The first ~~valve~~ flapper (46) ~~selectively~~ closes the inlet passage (53) when the ~~crank~~ piston rod (25) ~~is moved toward the~~

~~cover (50)~~ is actuated to perform a discharge stroke. A second inclined stopper (51) is provided to extend ~~extending~~ from the cover (50) into the outlet passage (52). The second ~~valve~~ flapper (45) is ~~wiggled~~ forced to move into the outlet passage (52) in the cover (50) and to open the outlet (42) ~~in~~ at the ~~close~~ closed end of the cylinder (40). ~~and abuts the~~ The second inclined stopper (51) is capable of preventing ~~to prevent~~ the second ~~valve~~ flapper (45) ~~from being overly wiggled~~ over flapping in the outlet passage (52) when the ~~crank~~ piston rod (25) moves ~~moved~~ toward the cover (50). The cover (50) includes an input joint (54) and an outlet joint (55) laterally extending therefrom. The input joint (54) and the output joint (55) are respectively connected to a hose (not numbered) for easily operating the miniature air compressor in accordance with the present invention.

F. Please replace the last paragraph on page 5 and the first paragraph on page 6, which is a continuation of the last paragraph on page 5, with the following amended paragraph:

To operate the miniature air compressor of the present invention, the shaft (11) is rotated to drive the ~~connector~~ crank (22) and the ~~crank~~ piston rod (25) to make the second end and the resilient ~~valve~~ seal (27) reciprocally moving ~~moved~~ in the cylinder (40) for compressing the air in the cylinder (40). With reference to Fig. 4, when the second end of the ~~crank~~ piston rod (25) ~~being backward moved relative to~~ moves away from the ~~close~~ closed end of the cylinder (40), the first ~~valve~~ flapper (46) ~~is wiggled~~ flaps toward ~~into~~ the inlet (43) ~~in~~ at the ~~close~~ closed end of the cylinder (40) so that the

input passage (53) communicates with the cylinder (40) via the inlet (43), and the second ~~valve~~ flapper (45) is forced ~~securely abut the close end of the cylinder (40)~~ to close the outlet (42) at the closed end of the cylinder (40) so that the compressed air ~~should not~~ is incapable of flowing ~~flow~~ back to the cylinder (40). Consequently, the air is sucked into the cylinder (40). With reference to Fig. 5, when the second end of the ~~crank~~ piston rod (25) ~~being moved~~ moves toward the ~~close~~ closed end of the cylinder (40), the first ~~valve~~ flapper (46) ~~securely abut the cover (50) to close~~ closes the input passage (53) in the cover (50) and the second ~~valve~~ flapper (45) is ~~wiggled into~~ forced to flap toward the output passage (52) to open the outlet (42) in the ~~close~~ closed end of the cylinder (40). Consequently, the compressed air is discharged ~~outputted~~ via the outlet (42) at ~~in~~ the ~~close~~ closed end of the cylinder (40), the output passage (52) in the cover (50) and the output joint (55) of the cover (50).